Summary of the Utah Mercury Work Group Meeting
September 25, 2008

MERCURY WORK GROUP MEMBERS PRESENT

John Whitehead, Chairman	DEQ/ Division of Water Quality
Walt Donaldson	DNR/ Division of Wildlife Resources
Paul Dremann	Anglers Group
Mark Martin	Department of Agriculture & Food
Bruce Waddell	Duck Clubs
Chris Cline	U.S. Fish & Wildlife Service/ Contaminants Program
Dave Naftz	U.S. Geological Survey
Scott Everett	DEQ/Div. of Environmental Response & Remediation
Jeff Salt	Great Salt Lakekeeper
Kevin Okelberry	Local Health Department
Jim Berkley	U.S. Environmental Protection Agency (by conf. call)

OTHERS PRESENT

Amy Dickey	DEQ/ Division of Water Quality
Jodi Gardberg	DEQ/ Division of Water Quality
Aaron Redman	Hydro Qual
Larry Scanlan	Utah Department of Health
McKell Drury	Utah Department of Health
Toni Carpenter	Utah County Health Department
Tom Aldrich	DNR/Division of Wildlife Resources
Chris Bittner	DEQ/Division of Solid & Hazardous Waste
Jon Parry	DEQ/Division of Solid & Hazardous Waste
Patrick Barickman	DEQ/Division of Air Quality
Tyler Cruickshank	DEQ/Division of Air Quality
John Vest	Utah State University
Judy Fahys	Salt Lake Tribune
Jacob Parnell	Utah State University
Stacy Adams	DEQ/Office of Planning & Public Affairs
Chris Jensen	U.S. Environmental Protection Agency (by conf. call)
Dan Wall	U.S. Fish & Wildlife Service (by conf. call)
Chris Jensen	U.S. Environmental Protection Agency, Region 8

1. Call to Order, Roll Call of Utah Mercury Work Group, Audience Introductions:
John Whitehead of DEQ Division of Water Quality (DWQ) called the meeting to order and welcomed all in attendance. Roll Call of the Work Group was taken and the audience introduced.

2. Approval of the April 24, 2008 Meeting Summary:
John Whitehead, DWQ asked if there were questions or comments concerning the April 24, 2008 Meeting Summary. There were no questions or comments and the summary was approved.

John Whitehead, DWQ mentioned that the first agenda item, Results of the 2007 Fish Tissue Analysis, had been removed from the agenda. He explained that three Utah Departments are involved when doing mercury fish advisory work. When they receive the fish tissue data from the previous year, they perform statistical analysis several times, discuss the results, prepare the advisories and release them. The team was not quite finished with the process before this meeting. He invited workgroup members to join him by conference call Tuesday September 30 at 9:00 AM to discuss the results. The press release would be issued Tuesday afternoon.

3. Mercury Outreach Program - Stacee Adams, Utah Department of Environmental Quality
Stacee Adams, Utah Department of Environmental Quality gave a presentation titled "MERCURY OUTREACH PROGRAM". The presentation is posted at this web address: http://www.deq.utah.gov/Issues/Mercury/prior_meetings.htm

Following the presentation, Stacee asked if there are other stakeholder groups or agencies who should be involved. She asked workgroup members to look at the plan and provide feedback so that she can incorporate it. She said that those interested could contact her at (801) 536-4482; e-mail sadams@utah.gov

Comments from the Work Group:

Jeff Salt, Great Salt Lakekeeper suggested that there's a lot of opportunity with not only angler groups but environmental groups and public interest groups who could be an integral active part of the plan. He also suggested that there are ethnic populations that rely on fish as a dietary supplement and mainstay so the plan should target these different ethnic groups and educate them about the fish advisories. He recommended that fish advisories could be issued in more languages. He added that someone should contact foreign human service organizations that deal with ethnic groups. In addition he mentioned industrial polluters. He gave the example, the Devil Slide cement factory that plans a new effort to reduce coal combustion by using alternative materials which in turn would reduce mercury contamination. He said the plant is currently one of the leading mercury polluters in the watershed, if not the state. He thought that if the industries were involved it could show positive steps are being taken to remove mercury.

Stacee Adams, Utah Department of Environmental Quality replied that that is exactly the information they need for the plan and would help McKell Drury identify groups to target fish consumption information.

Chris Cline, U.S. Fish & Wildlife Service asked if the anglers group were involved and if the plan included input from stakeholders.

Stacee Adams, Utah Department of Environmental Quality replied that Clay Perschon, DWR was working with DEQ and the angling community to provide input.

Chris Cline, U.S. Fish & Wildlife Service suggested getting input from the stakeholders before crafting the plan.

Stacee Adams, Utah Department of Environmental Quality replied that anyone is welcome to participate.

Paul Dremann, Anglers Group suggested that all the stakeholder groups should be part of getting the word out.

Chris Cline, U.S. Fish & Wildlife Service asked if fish consumption from supermarkets was going to be targeted.

Stacee Adams, Utah Department of Environmental Quality replied that fish taken from Utah waters is targeted by the plan because the advisories that are based on that. The plan is written to educate people who are consuming fish locally. That includes the angling community especially the mothers and the children. Focusing on the larger campaign of targeting the grocers and fish consumers at the supermarket is a secondary goal. The plan can expand once the primary goal is achieved.

Chris Cline, U.S. Fish & Wildlife Service asked if the duck advisories and that community will be targeted.

Stacee Adams, Utah Department of Environmental Quality said that they hope the plan we set up for fish advisories will work for fowl advisories or any type of mercury issue.

Paul Dremann, Anglers Group suggested that DWR include a link from the fish advisories website to the blue ribbon fisheries website and he said that the message should include the positive aspects of eating fish.

Jeff Salt, Great Salt Lakekeeper said that they did a survey of grocery stores in Salt Lake County last year to see how many grocers were displaying fish advisories at their counter. Whole Foods, Smiths Food & Drug and Albertsons had signs. He suggested contacting the Retail Grocers Association because they have a state-wide association and have representatives that can communicate to all the grocers, representatives and regional managers. The one industry that hasn't been targeted is restaurants. Other states have restaurants post warnings. He also mentioned that the workgroup should be cognizant not to diminish the fishing industry in Utah by creating panic. We should provide information that warns people and educates them about how to reduce their risk but doesn't take them out of the activity. That's going to be delicate.

Stacee Adams, Utah Department of Environmental Quality stressed that the groups input is essential for the plan to be effective and thanked all for their input.

4. Inorganic Contaminant Concentrations and Body Condition in Wintering Waterfowl from Great Salt Lake – Josh Vest, Utah State University

Josh Vest, Utah State University gave a presentation titled "MERCURY AND SELENIUM IN WINTERING WATERFOWL FROM THE GREAT SALT". The presentation is posted at this web address: http://www.deq.utah.gov/Issues/Mercury/prior_meetings.htm

Comments from the Work Group:

Bruce Waddell, Duck Clubs asked if any significant migration of birds were wintering somewhere else further south.

Josh Vest, Utah State University replied that it is quite possible that the birds were passing north through here from a more southerly wintering area. It's very difficult to determine. With some stable isotope compositions and muscle tissues we could get at that but we didn't go that far in our analyses. We have no idea where they were the day before they were collected. Hence, that's an issue with our data. What we really care about is their breeding performance. We do want them to make it through the winter but ultimately we care about is how these birds perform on the breeding grounds.

Chris Cline, U.S. Fish & Wildlife Service commented that the concentration trends for mercury matched up well with the brine fly larvae consumption and asked if the same trend holds for selenium.

Josh Vest, Utah State University replied that it does and is almost identical.

Chris Cline, U.S. Fish & Wildlife Service asked if it as responsive to the diet as the mercury concentrations.

Josh Vest, Utah State University replied that it is just as responsive.

Tom Aldrich, DNR/Division of Wildlife Resources asked if there were liver concentrations from the summer of sampling.

Josh Vest, Utah State University replied that it was not part of this data set. He believed that it was just muscle tissue.

Bruce Waddell, Duck Clubs asked about the Northern Shovelers in Farmington Bay, if there was a particular site that identified the birds with mercury within Farmington Bay in the winter time and was there an association with the outfall of the oil drain/sewer drain. The reason he asked was when he worked for the USFWS was data collected at the Delta of both the Goggin Drain, Lee Creek and at Farmington Bay and that information showed large concentrations of mercury in some of the samples from the oil drain area.

Josh Vest, Utah State University replied that his research was primarily with Golden Eye. The shovelers were opportunistic sampling events. All the birds were collected on the East side of the Lake in the early winter or late fall period. All the birds that were collected in December and February were collected elsewhere.

Bruce Waddell, Duck Clubs asked how the mercury in the ducks was getting into their systems.

Josh Vest, Utah State University replied that Golden Eye feed on the brine shrimp larvae. The shovelers feed on different invertebrates.

Bruce Waddell, Duck Clubs asked how mercury is getting into the brine fly larvae.

Josh Vest, Utah State University replied the brine fly larvae feed on diatoms and algae within the Great Salt Lake. It is part of the bio magnification process. He added that the problem is the form of the mercury. The Great Salt Lake is incredibly efficient at converting inorganic mercury to methylmercury. Whatever input source mercury is coming into the lake, it's very efficiently converted from an inorganic form to an organic form which is rapidly accumulated throughout the food chain. If it was just inorganic within the Lake you probably wouldn't see this rapid accumulation.

5. Mercury Study of Sand Hollow Reservoir – Jodi Gardberg, Utah Division of Water Quality

Jodi Gardberg, Utah Division of Water Quality gave a presentation titled "MERCURY STUDY OF SAND HOLLOW RESERVOIR". The presentation is posted at this web address: http://www.deq.utah.gov/Issues/Mercury/prior_meetings.htm

Comments from the Work Group:

John Whitehead Utah Division of Water Quality commented that the funding is dependant on the Governor's budget and the Governor said that there would be no building blocks this year. That is the reason why we were unable to submit this from any department level at this point. If there are building blocks next year, the proposal will be resubmitted.

6. Mercury and Sulfur Cycling in Great Salt Lake - Jacob Parnall, Utah State University

Jacob Parnall, Utah State University gave a presentation titled "MERCURY AND SULFUR CYCLING IN GREAT SALT LAKE". The presentation is posted at this web address: http://www.deq.utah.gov/Issues/Mercury/prior_meetings.htm

Comments from the Work Group:

Bruce Waddell, Duck Clubs asked if Jacob could speculate the effect of seasonal changes in temperature on the production of mercury in the Lake.

Jacob Parnall, Utah State University replied that it's his understanding that the deep brine layer where most of the methylation is occurring doesn't fluctuate as much in temperature as the rest of the Lake so there is fairly constant turnover of methyl mercury. However, the surface where the Mer B genes are seen, the one's demethylating everything, have a lot more fluctuation. In winter, he speculated that there would be a higher concentration of mercury in the surface layers because those genes and those microorganisms are not going to be going quite as fast.

Bruce Waddell, Duck Clubs asked if the processes described for mercury and sulfur fit for selenium.

Jacob Parnall, Utah State University replied yes. There are some organisms that will use selenium instead of sulfur in protein synthesis so that's one of the things that we would look at. We haven't looked at anything with selenium yet.

Bruce Waddell, Duck Clubs asked if higher levels of selenium could be competitive with mercury and sulfur in that process.

Jacob Parnall, Utah State University said that he thought it was possible.

Chris Cline, U.S. Fish & Wildlife Service asked if it was possible that the Mer A and Mer B genes could be used as a potential remedial strategy.

Jacob Parnall, Utah State University replied that the organisms that have both the Mer A and Mer B gene don't cycle it back to the inorganic form of mercury. They cycle it to elemental mercury which then just goes off into the atmosphere.

7. Update on Great Salt Lake Mercury Ecosystem Assessment - Jodi Gardberg, Utah Division of Water Quality

Jodi Gardberg, Utah Division of Water Quality gave a presentation titled "UPDATE ON THEGREAT SALT LAKE MERCURY ECOSYSTEM ASSESSMENT". The presentation is posted at this web address: http://www.deq.utah.gov/Issues/Mercury/prior_meetings.htm

8. Next Meeting Schedule and Topics

Jeff Salt, Great Salt Lakekeeper suggested an update from Nevada regarding their new regulations and an update on the three-state workgroup.

Chris Cline, U.S. Fish & Wildlife Service suggested a presentation on the results from the air sampling done by the Utah Division of Air Quality.